**Lecture: Key Concepts in Stress and Health**

**We all experience stress**

We cannot live without stress. The basic action of breathing and circulating or blood involves stress. The lungs must be pushed our against 14.7 lbs. of air pressure to create a vacuum into which out side air flows. The heart must push blood through arteries and veins that are elastic and trying to collapse. Stress is not always harmful to us. It is the amount, duration, and meaning of the stress that influences whether it is harmful or enhancing to health. Our skills in coping with stress also impact its effects on us. This lecture will summarize the basic concepts in Chapter 14 Stress & Health needed for an outline of the current state of knowledge of stress and its relationship to health and illness. It will also elaborate on one pivotal theory of stress. Use this lecture as a framework for unifying the various concepts into an understanding of the dynamic relationship of stress and health.

**Stress may enhance health**

Exercise builds stronger bodies only if we push ourselves beyond our regular level of strength and endurance. Progressing in your intellectual skills occurs only by going beyond your adaptation level for the complexity and amount of knowledge you must acquire. Stress as "challenge" enhances physical and emotional well-being. Mountain climbers want risk and challenge, but they want the type that they feel they can master and mostly control. They don't want to be perfectly in control because then the challenge would not be so great. They want to be on the edge between in-control and having to use every degree of skill, concentration, and problem solving to succeed. The same is true of race car drivers, downhill skiers, chess players, musicians, and artists. These activities have been described by Csikszentmihalyi (see the reference section of your text for two of his works) as inducing the experience of "flow" that totally captures the attention, makes it very easy to continue, and very hard to stop. There are many other activities and professions that produce "flow", but the essence of the experience is to be on the edge of challenge and failure with the perception that your own efforts will make the difference between good and bad outcomes. In these conditions stress builds healthier bodies and higher well-being. People who experience "flow" frequently report high degrees of satisfaction in life.

**Distress may be destructive to health**

Hans Selye’s research that led to the concept of the General Adaptation Syndrome (GAS) demonstrated that stress that is perceived as a threat (distress) may be debilitating if it is continuous. But even “flow” could go on too long and the person would need a break. But "flow" only develops in activities that are freely engaged in. Negative stress, or distress, is often part of activities that we perceive we cannot escape. Our bodies and minds seem to have evolved to cope well with sudden and brief stressors, such as escaping attack by a predator. We do not seem to be designed to handle chronic stress even if it is mild, like driving in heavy traffic. Our society has created many conditions that produce chronic stress and are associated with stress related illnesses. We have time pressures, work pressures, relationship pressures, crowding, noise, crime, to many things to do in too little time, achievement pressures, and even education-related pressures in this course. It is this detrimental effect of ongoing stress that underlies the GAS (p. 552) and the concepts of stress-induced health problems.

**Stress is in the eye of the beholder**

In the previous Lecture on emotion I described the process by which we influence the emotion we experience in a situation by the interpretation or cognitions we select in the experience. The text described Lazarus's theory of appraisal as influencing our stress experience (p. 550-551). In this chapter there are several applications of this theory although it is not mentioned directly. I believe this theory is most beneficial to our understanding the differences between individual's stress levels. The theory's main points are :

1. When we experience a situation or event we first determine if it is a threat, a challenge, or is neutral.

2. We then assess our inventory of resources to cope with the event. If we do not perceive we are adequate to the task, we must be able to withdraw or we will feel trapped in a situation with aversive consequences coming. That induces distress and all the physiological processes that harm our health as described in Chapter 14. If we perceive that we have the resources to successfully cope with the situation, we feel challenged and optimistic. Note that challenge and optimism are related to enhanced health and sense of well-being.

This second stage of appraisal impacts the first stage in a loop process. If we at first perceive a threat but then realize we can handle it, it reduces the distress and may even create a perception of challenge. If at first we perceive a challenge but then realize that we don't have what it takes to be successful, we may begin to experience distress as we see the aversive outcome of failure looming ahead. Depending on the meaning of the outcome to us, the distress may be mild or severe. If the situation is always hanging over us and we always feeling inadequate to it and anxious about negative outcomes, we are always under distress. Our health and well-being take a beating in that scenario.

3. Next we must select from our repertoire of coping resources. There are two types of coping resources: instrumental and palliative (emotion-focused). Instrumental coping solves the problem and removes the stressor form our experience as in working out a conflict with someone to reduce the distress or by getting a better job to reduce financial pressures. Palliative coping alters our physiological reactions to stress that will not go away and cannot be escaped. These include relaxation skills, reinterpretation of the meaning or effects of the stressor, acceptance of the situation, or optimism about future improvements in the situation. Palliative skills would include relaxing in the traffic jam even though you have an important appointment that is being missed. You realize you cannot do anything about it, so you may as well relax because anger and tension will not make the cars move any faster, but it will hurt you, so you choose to relax instead.

As we go to our repertoire of coping skills to select one or more, we may become more optimistic of success and reappraise the situation in the first step. It may become less threatening and hence less distressful. We could find that our coping resources will be less adequate than we initially thought in Step 2 and we would become more threatened now. Even a challenge might be converted into a threat as in traveling to a another country for the first time and finding your credit cards are missing and you have no money for anything and no way to get any.

4. This interactive appraisal and coping process is at the heart of the impact of stress on us. If we interpret a situation as stressful, it has the stress-related effects on us. If we have few coping sources, more situations will be perceived as distressing. If we have many coping resources, more situations will be perceived as challenging or at least neutral. As I am driving down the road and have a flat tire, I could be annoyed at the trouble it causes or highly threatened by the memory of Bill Cosby's son's murder a few years ago as he changed his tire. If I don't know how to change a tire and it is night time, I may feel very threatened as I perceive helplessness and vulnerability to someone's attacking me. If I assure myself that this is unlikely and I do know how to change a tire, I may decide that I will get this done in ten minutes and be on the road safely. But then I find that my spare tire is flat. Now I feel threatened for sure. But if I have a good spare, have a good flashlight, have a handgun and the skill to use it, and have changed many tires, I may only feel annoyed at the hassle and not feel threatened (many instrumental skills). I may have none of these things but have a cell phone and a close friend who will quickly be here to solve the problem for me (social support). My distress is much less then.

These factual situations are part of the appraisal and coping process. Perception is also critically important. If I have little confidence in myself to handle a flat tire even though I have been taught how to do it and have the tire, I may feel more threatened. If I have the cell phone but don't believe I should bother anybody to come here, or don't believe they would want to help me, the facts do not determine my reaction as much as my perception of the facts determines it.

A second example of the role of coping skills and perception could involve getting started in this WAOL course. If you are a computer whiz and have taken several college courses including online courses before, you got started with little problem. Learning to use Blackboard, to take online quizzes, and to use ProQuest, probably did not cause much distress. But if you were new to using the Internet, had never taken an online course, and had low self-confidence, you may have been quite distressed. Same situation, different coping resources. Some of our community colleges go to great effort to be sure new online students have the knowledge and coping skills to begin a course with little stress.

Now add pure perception. If you perceive college as a supportive environment that will find a way to assist you to get through as long as you put forth the effort, and perceive instructors as willing to be flexible when circumstances are beyond all of our control, like getting started on the three programs we use and getting books late, you may be hassled but not threatened about failing the course because of these factors. But if you see colleges and instructors as money-hungry and deliberately placing obstacles in your path to cause you to fail and drop out, you have been very distressed when you had these difficulties as you would see no support or flexibility to allow you to adapt to the new situation and have the time to catch up. You might even feel quite angry at this new ploy to get your tuition and frustrate you into quitting. The reality of the college and instructor's intent make no difference in your initial perception and resultant choices. It is your perception of reality that determines what you will do.

**Conclusion**

The appraisal and coping process underlies the statement that "stress is in the eye of the beholder." Any event of situation may be perceived differently by different individuals due to past experience with it, learned skills, personality traits like Type A and optimism, and the amount of distress being experienced already. Other factors mentioned in the chapter include social support that may be instrumental in helping cope with problem as in coming to help with the flat tire, or being eager to listen and be supportive with your sharing your experiences. Both reduce the distress levels. Locus of control is a personality variable that describes an individual's tendency to see the possibility of having an influence on the outcome or being a pawn in the winds of fate (helpless, fatalistic). Those of us with internal locus of control are more likely to exert the effort to solve the problems or acquire the resources to solve the problem next time.

**The chart on page 575 abd Fig.14.33 on p. 590 describe the key processes in a graphic way.** If you see the relationships among the variables as you move down the p. 575 chart and understand that each level is an influence toward health or illness that have a collective effect toward the bottom, you have grasped the essence of this chapter. If you can look at each component in Fig. 14.33 and understand how these three broad influences interact with each other to impact our health, you have grasped the state of knowledge on stress and health.

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